

EXHIBIT 4

FILED UNDER SEAL

Contains Highly Confidential AEO and Source Code Materials

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

GOOGLE LLC,

Plaintiff

v.

SONOS, INC.,

Defendant.

CASE NO. 3:20-cv-06754-WHA

Related to CASE NO. 3:21-cv-07559-WHA

**OPENING EXPERT REPORT OF DR. DAN SCHONFELD REGARDING U.S. PATENT
NO. 10,848,885 AND U.S. PATENT NO. 10,469,966**

Contains Highly Confidential AEO and Source Code Materials

of the '885 and '966 patents. Based on my current understanding of Sonos's infringement contentions and my review of the evidence in this case, including documents, deposition testimony and source code, it is my opinion that additional non-infringing alternatives were available at the time of the alleged first infringement (and are still available today).

1100. I have reviewed Google's interrogatory response to Sonos's interrogatory number 18 and I incorporate that disclosure herein. In my opinion, the alternatives disclosed by Google are appropriate. Below I describe those alternatives.

Alternative #1 – No Standalone Mode

1101. I describe Alternative #1, an implementation in which when the accused "standalone" speaker is added to a target group, it matches the music (or silence) of the target group. The alternative is a non-infringing alternative for the Accused Instrumentalities to the asserted claims.

1102. Claim 1 of the '885 patent is exemplary. Claim 1 includes limitations that require the zone player to be added to two different zone scenes: "(i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked" and "(ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player." The claim then requires that "after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for

Contains Highly Confidential AEO and Source Code Materials

invocation.” In other words, the claim requires the zone player that was playing back music individually to be added to two different zone scenes, but to continue to operate in a “standalone mode” until one of the two zone scenes is “invoked.”

1103. With this non-infringing alternative, infringement is avoided by having the “standalone” speaker that is added to two zone scenes not continue to operate in “standalone” mode after it has been added to those zone scenes. Instead, the accused “standalone” speaker after being added to a zone scene may match the music (or silence) of the target zone scene. Indeed, currently, when a single speaker is playing music and a group is playing music and the single speaker is added to the group, the speaker will begin playing the music that the group was playing. Having this same behavior for the situation where a speaker is playing music and joined to a group that is not playing music would harmonize the behavior in these two situations.

1104. In this alternative, the accused zone player would never “continue to operate in standalone mode” after receiving the indication that it “has been added to a first zone scene.” Rather, the accused zoneplayer would immediately adopt the behavior of the accused “zone scene” to which it was added. Therefore, the accused zone player would no longer be “configured to play back media individually” or, equivalently, remain in the accused “standalone mode.”

1105. All asserted claims of the ’885 and ’966 patents require the “standalone mode” functionality discussed above, and therefore this non-infringing alternative applies to all asserted claims. For example, in claim 1 of the ’966 patent, that claim requires that a “first zone player is operating in a standalone mode,” and that after a “first request,” a “second request,” and a “third request,” that “based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players.” Accordingly, the ’966 patent claims, which each require these same steps, are subject to the alternative. In my opinion, this alternative would have been straightforward and taken minimal

Contains Highly Confidential AEO and Source Code Materials

time, which reflects its ready availability.

1106. I understand that Google has publicly released a new version of its source code through software updates to 25% of the accused Google products with a display, and plans to continue rolling out the change to the remaining accused products through December 2022.

Alternative #2 – No Overlapping Groups

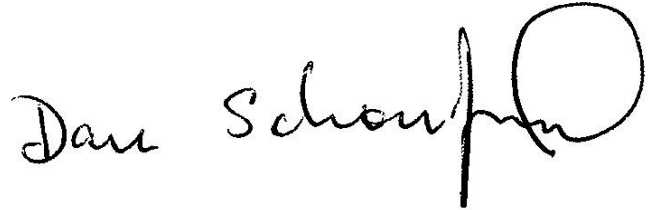
1107. I also describe an Alternative #2. This alternative is an implementation in which a speaker that is already a member of one group will be forced out of this (first) group when a user attempts to add the speaker to a new (second) group. In other words, with this non-infringing alternative, no speaker can be a member of more than one group at the same time.

1108. This is a requirement of the asserted claims. For example, claim 1 of the '885 patent requires that the zone player "receiv[es], from a network device over a data network, a first indication that the first zone player has been added to a first zone scene" and that the zone player "receiv[es], from the network device over the data network, a second indication that the first zone player has been added to a second zone scene." "[A]fter receiving the first and second indications, [the zone player] continu[es] to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation." Similarly, claim 1 of the '966 patent requires a "first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player" and a "second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player." Claim 1 of the '966 patent also requires "while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene." These representative claims (for this limited purpose) show that the asserted claims require the overlapping groups described above.

1109. Sonos's expert Dr. Almeroth has opined that this is the case. For example, Dr.

Contains Highly Confidential AEO and Source Code Materials

I, Dan Schonfeld, declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

A handwritten signature in black ink, reading "Dan Schonfeld" followed by a stylized circular flourish.

DATED: November 30, 2022

Dan Schonfeld, Ph.D